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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,135	02/17/2004	Bernd Schulze	RUM223	3380

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HORST KASPER
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EXAMINER

BONK, TERESA

ART UNIT	PAPER NUMBER
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3725

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/781,135	Applicant(s) SCHULZE, BERND	
	Examiner Teresa M. Bonk	Art Unit 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on June 22, 2006 & August 22, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-24 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claim 18 is directed to a non-elected invention that is independent or distinct from the invention elected on December 30, 2005; therefore this claim is withdrawn from consideration.

Claim Objections

2. Claim 24 is objected to because it include reference characters which are not enclosed within parentheses, see the second to last and third to last lines.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 19-25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

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art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While the specification discloses a bending step on the second region, it does not provide reasonable disclosure for how the workpiece changes between Figure 2 and Figure 3, as described in the Brief Description of the Drawings.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 19-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

8. With regards to the wording of claim 1, the sixth and seventh lines describe the tubular starting part as being reduced “over” particular regions; this makes the claim indefinite.

9. The appearance of the term “a mold blank” on the eighth line makes the claim unclear. The examiner understand that the “tubular starting part” becomes the “mold blank” after a reduction deformation step occurs; however the manner in which the claim is currently stated makes the mold blank appear to be a separate or new element.

10. The examiner understands that the applicant is trying to transition between method steps when using the phrase “then following” or “that in the following;” however it is creating

awkward and unclear language. Examiner suggests other phrases such as, “after (the particular step)” or elimination of the transition phrases completely.

11. Regarding claim 19, there is insufficient antecedent basis for the following limitations: “the shape (of an A-column),” “the A-column,” and “the required curvature (of the A-column).”
12. Regarding claim 24, the phrase “from about” renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed, thereby rendering the scope of the claim(s) unascertainable.
13. Also with regards to claim 24, the examiner believes “a starting blank” is the same element as “a tubular starting part,” as in claim 19; however, as the claim stands “a starting blank” is a new and/or different element limitation. Examiner suggests changing “a starting blank” to “a tubular starting part.”
14. Appropriate action is required.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 19-20 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bignucolo et al. (US Patent 6,513,243) in view of Meredith (US Patent 5,074,555), as best understood. Bignucolo et al. discloses a method of producing a hollow molded part made of a metallic material in a shape of an A-column having a tubular starting part (1) with an outer diameter and a starting wall thickness (Figure 1). Initially the tubular starting part reduces, by radial deformation performed by rolling (fluoforming, rollers, Column 2, lines 32-35), a second conical region (5) and a third cylindrical region (4) to a smaller diameter (Column 2, lines 36-41) to form a mold blank (a hollow first intermediate product 2). As best understood, the mold blank's second conical region is then bent under axial pull tension to a curvature (Column 2, lines 43-55, Figure 3). A final forming step is performed by inner high pressure metal forming (hydroforming) in the first and in the second regions (Column 2, lines 66-67 & Column 3, 1-4; Figure 6).

17. Bignucolo et al. discloses the invention substantially except for an increased wall thickness relative to the starting wall thickness in the second and third regions. Meredith discloses a method of radially deforming a tubular shaft having second (61) and third (62) regions with an increased wall thickness (22) relative to the starting wall thickness (20) (Column 3, line 55-56 and Figures 2a-b). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that Bignucolo et al.'s radial deformation step can increase the wall thickness of the second and third region because "it is desirable to design (a tubular part) without the excessive weight (and) having a wall thickness along the tapered length

(second region) and the tip portion (third region) able to provide a desired weight distribution and to withstand the forces exerted on the shaft tip (third region)” (Column 1, lines 45-50).

18. Regarding claim 24, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the particular numerical values claimed depending on the characteristics desired for the finished product, they are not a patentable distinction.

19. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bignucolo et al. and Meredith as applied to claims 19-20 and 23-24 above, and further in view of Self et al. (US Patent 2,267,623). The combination of Bignucolo et al. and Meredith disclose the invention substantially except for an intermediate annealing prior to the pressure forming and annealing between the deformation step and the pressure forming step. Self et al. discloses an intermediate annealing after a deformation step (Column 2, lines 35-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to anneal the product in order to prevent “failure of the blank” (Column 5, lines 69-70) in a manner such as cracking or breaking before further forming is performed.

Response to Arguments

20. Applicant's arguments filed on June 22, 2006 have been fully considered but they are not persuasive.

21. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Bignucolo et al. is not required to

recite all the state-of-the-art. The purpose of having a secondary, teaching reference is to combine what state-of-the-art is lacking from the base reference.

22. It is noted that the applicant only claims the shape of an A-column and not an A-column. Applicant's drawings show the shape of an A-column and/or an A-column and therefore, the claims have been rejected on art that also shows corresponding drawing representations of such.

23. Examiner apologizes for the typographical error with regards to the Self et al. reference on the Notice of Reference Cited filed February 16, 2006. A new PTO-892 form has been submitted with this action to amend the inconsistency.

24. With regards to applicant's arguments involving the annealing step, if the annealing is performed after the radial forming step, as described in the above rejection, and radial forming is performed prior to the inner high pressure forming, as stated in independent claim 1; then inherently annealing can be performed prior to pressure forming and annealing can be performed between radial forming and pressure forming. Although there is a claimed bending step between the radial forming and the pressure forming, no relationship exists between the annealing and the bending steps.

Conclusion

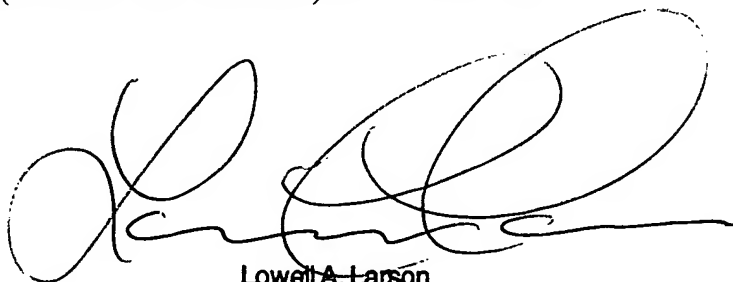
25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa M. Bonk whose telephone number is (571) 272-1901. The examiner can normally be reached on M-F 9 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Teresa M. Bonk
Examiner
Art Unit 3725



Lowell A. Larson
Primary Examiner